



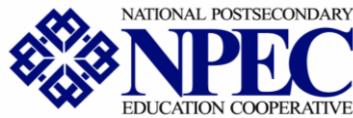
FULL TIME EQUIVALENT (FTE) FOR GRADUATE AND DOCTOR'S-PROFESSIONAL PRACTICE STUDENTS

A Paper Commissioned by the National Postsecondary Education Cooperative

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INTRODUCTION

The student full-time equivalent (FTE) measure has a long history in U.S. postsecondary education. Credit hours, contact hours, and their derivative FTE have been used as proxies for both student and faculty effort. FTE ultimately became a core measure for planning, evaluating and assessing human resource allocation within higher education. Despite questions about the appropriateness of using a single standard to assess effort across diverse institutions, levels, and programs that have been raised since the inception of this measure, FTE is still informative and widely utilized. With this in mind, it is important for the National Center for Education Statistics (NCES) to ensure its methodology for estimating FTE using data from the Integrated Postsecondary Education Data System (IPEDS) is sound.

NCES calculates an annualized student FTE from data collected through IPEDS. Historically, this calculation relied upon the distinction between undergraduate, graduate, and first-professional students. Recently, the IPEDS postbaccalaureate award levels were reclassified, resulting in the elimination of the first-professional designation. Therefore, the first-professional student enrollment data used to calculate the FTE measure for professional students in the past is no longer available.

This paper first details the recent methodological changes for the graduate and professional student 12-month FTE calculation within IPEDS. It then reviews variations in practices for calculating graduate and professional student FTE across states. Finally, suggestions for improving the current calculation of graduate and doctor's-professional practice student FTE in IPEDS are presented.

THE IPEDS 12-MONTH STUDENT FTE CALCULATION

The 12-month student FTE measure is derived from the instructional activity data collected through the IPEDS 12-month Enrollment component. Total reported credit and/or contact hours are divided by a factor to determine full-time equivalence of students. The factor used is dependent upon student level (undergraduate or graduate) and whether the institution is on a quarter or a semester/trimester/4-1-4 or other calendar system. The resulting undergraduate and graduate FTE measures are summed to calculate total FTE.

Historically, the headcount of first-professional students was used to calculate an FTE for these students separately from all other graduate students (See Table 1). The resulting 12-month FTE for first-professional students was added to the calculated FTE for undergraduate and graduate (non-first-professional) students to obtain the institutional total 12-month FTE. With the reclassification of the postbaccalaureate award levels, new doctor's degree categories were introduced, and the first-professional category was eliminated. All postbaccalaureate students (including professional students) are now reported as graduate students on the IPEDS enrollment components and are treated the same as all other graduate students for the purposes of calculating an FTE. Credit activity is reported for all graduate students (including professional students), and the graduate FTE is calculated.

Feedback from the IPEDS community indicates that reporting credit activity for professional students is a challenge, and often without meaning. For example, medical students or dental students most often do not have an option of attending less than full-time. Further, credits are not typically used to measure activity of professional students. In cases where credits are used, they are very different than those of other graduate students, often as a result of the clinical work often tied to professional education.

In response to this feedback, in the 2012-13 data collection NCES will begin asking institutions to exclude professional student (now categorized as doctor's-professional practice) activity from the graduate credit hours reported and instead report an FTE for these students separately. This paper explores possibilities for the calculation of an FTE for doctor's-professional practice students in the future and suggestions for improving the calculation of the graduate student FTE.

Table 1. Calculation of the 12-month FTE for Graduate and Professional Students, by IPEDS Data Collection Year

	Prior to 2009-10		2009-10–2011-12	2012-13	
	Graduate	First-Professional	Graduate (all postbaccalaureate <u>including</u> doctor's professional practice)	Graduate (all postbaccalaureate <u>except</u> doctor's professional practice)	Doctor's- Professional Practice
Calendar System:					
Semester/trimester/4-1-4 plan/other calendar system	Total credit hours/24	Calculated using the 12-month unduplicated headcounts. The ratio of full- to part-time first-professional students from the previous collection year fall enrollment (which corresponds to the same academic year students) was calculated, and applied to the 12-month unduplicated headcount. Adding the resulting full-time and one-third part-time student estimates results in the FTE for first-professional students.	Total credit hours/24	Total credit hours/24	FTE for doctor's professional practice students will be reported separately, as defined by the institution. FTE for all other postbaccalaureate students will continue to be calculated based instructional activity data.
Quarter system	Total credit hours/36		Total credit hours/36	Total credit hours/36	

NOTE: Using the new postbaccalaureate award levels was optional for the 12-month Enrollment component in the 2009-10 data collection year and became mandatory in the 2010-11 data collection year.

REVIEW OF STATE STUDENT FTE CALCULATIONS

A review of information available on Web sites identified state-level FTE definitions and practices (i.e., those used by higher education boards, commissions, and other state agencies) for 38 states. The NCES method for calculating graduate student FTE serves as a default for many states.¹ Of the 38 states, 33 used a conventional credit hour divisor for the graduate level as a whole. Five states used separate divisors for master's and doctor's level students, the most common being 24 and 18 respectively, for a semester calendar system.

When looking at FTE practices for professional students, several states vary considerably from the IPEDS methodology. Some states simply use a different credit hour divisor than the IPEDS methodology that treats professional students the same as all other graduate students, while other more notable exceptions include using:

- Unique divisors for each different professional program (e.g., law vs. medicine)
- Headcount
- Full-time headcount + 1/3 Part-time headcount
- Mix of headcount and credit hours (e.g., credit hours determine full-time equivalency for part-time students while a full-time student is considered 1 FTE)
- Course-level based divisors as opposed to student-level based divisors²

Overall, there is no identifiable standard for calculating professional student FTE. Interviews with several regional, state, association and institution-level representatives further underscore the lack of standards for calculating full-time equivalence among students in professional programs.

¹ It was not always clear whether the definitions applied to all institutions in the state. However the material found provides a useful overview of variation in definitions and practices at the state level.

² i.e., Separate divisors are used for lower division and upper division undergraduate, master's, and doctor's level courses, regardless of the level of the student enrolled in the course.

INTERVIEWS

Interviews were conducted with representatives from the higher education community to identify in more depth the challenges associated with the student FTE measure for graduate and professional students. Several common themes emerged and are summarized below. Appendix A contains a list of the individuals interviewed and the organizations they represent.

Lack of Fit between FTE and Professional Programs

The generally poor fit of a student FTE measure for professional programs, now designated as doctor's-professional practice in IPEDS, continues to be an issue. The primary challenge is that the "instructional intensity" of these programs as determined through credit hour production varies considerably across programs. Interviewees characterized FTE as something they have to fit professional program enrollments into for purposes of IPEDS reporting and not pertinent to their own measurement efforts.

Generally, health programs are the least amenable to fitting within a credit or contact hour related framework, particularly due to lack of consistency in treatment of students engaged in clinical aspects of study. In medical schools and colleges, for example, students are generally considered to be attending full-time, regardless of their credit load, which often exceeds the single FTE standard during parts of their study and then may be very low during clinical parts of training. In law schools, on the other hand, full-time and part-time programs are common, with the difference being one takes three years to complete and the other four years (i.e., the part-time program runs at $\frac{3}{4}$ the intensity of the full-time program).

Further, some interviewees felt it was not appropriate to include the student FTE measure for professional programs in institution-level comparisons. Again, there was particular emphasis on health-related professional programs which are often excluded from resource analyses due to the different scale and funding model for health programs compared to other academic programs. In fact, it was mentioned that the inability to isolate health program related enrollments and expenses, much like the medical and non-medical staffing is distinguished in the IPEDS Human Resource data, is quite limiting for analysis purposes.³

³Although not a primary focus of this paper, the interviews revealed consistent concerns regarding the alignment of the student FTE measure with staffing information (e.g., FTE faculty) and expenditure data often used to calculate spending per FTE ratios. Part of the concern relates to the inability to separate out of instructional activity and expenditures data related to some very high cost programs (e.g., health programs). Further study is recommended that focuses specifically on the scope of activities represented in the 12-month Enrollment, Human Resources, and Finance components to determine if there are ways to bring them into further alignment

Course-Level Based vs. Student-Level Based Student FTE Measures

Some interviewees raised the issue that for most traditional undergraduate and many graduate level programs (especially those at the master's level), instructional resource demands are linked more closely to the course-level of enrollments than they are to the level of the students enrolled. For this reason, several states employ a course-level based FTE, or both course-level and student-level based methods, depending on the specific need (as seen in the *Review of State Student FTE Calculations* section). In a student-based measure, the student level determines the divisor while in a course-based measure, the course level determines the divisor.

The differences between a course- and student-level focus are not very large at the institution level (i.e., undergraduates taking graduate-level courses or graduates taking undergraduate-level courses). However, the differences are more apparent within an institution, especially for those units that offer a large number of "service courses" (courses taken by students outside the major, such as in English and Mathematics departments). Some state approaches accommodate for course level even further, distinguishing between lower and upper division undergraduate courses as well as master's and doctor's level within graduate courses. Some interviewees felt that a course-level based measure better aligns the student FTE measure with the staffing resources required for instructional purposes.

SUGGESTIONS FOR THE IPEDS GRADUATE AND DOCTOR'S-PROFESSIONAL PRACTICE FTE

Because of the misalignment of the student FTE measure with actual enrollment intensity in doctor's-professional practice programs, combining these enrollments with all other graduate level instruction confounds the calculation of graduate student FTE. On the other hand, this problem creates an opportunity to consider appropriate ways to address this issue that might also generally improve the usefulness of the student FTE measure. In this final section, several alternative approaches for the student FTE enrollment measure through IPEDS survey collections are presented. In addition, several suggestions are made to ensure better alignment between student FTE, staffing and expenditure information collected through IPEDS.

0. Continue with the 2012-13 Data Collection Method

This approach is labeled as the “zero” approach because it entails doing nothing. That is, the methodology for calculating 12-month FTE for graduate and professional students would remain the same as it will be for the 2012-13 data collection. Institutions report total credit hours for all graduate students except doctor's-professional practice students, and an FTE is calculated using the divisors of 24 or 36, depending on institutional calendar system. For doctor's-professional practice students, institutions simply report an FTE which will then be added to the calculated undergraduate and graduate FTE for an institutional total FTE.

Further Expansion of this Approach: A more flexible and adaptable approach would be to allow institutions to report instructional activity through two methods: 1) credit or contact hours by level for those programs for which enrollment intensity is directly related to hours enrolled; and 2) headcount by “program enrollment intensity” for programs that do not readily lend themselves to credit hour equivalence determination. If institutions (or their state systems) have established standards for converting professional, clinical, or doctoral dissertation work to a credit hour basis, then these could be included in the credit/contact hour reporting. For other programs, the “program enrollment intensity” could be characterized as it has in the past with the simple, binary full-time and part-time distinction. Alternatively, a more fine-grained set of distinctions could be offered for reporting headcounts, such as $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{4}$ -time.

1. Collect Enrollment Counts for Doctor's-Professional Practice Students Separately

Perhaps the easiest and least burdensome method would be to treat doctor's-professional practice programs, for the purposes of enrollment, as first-professional programs were treated before the change in postbaccalaureate award levels. This would require reporting doctor's-professional practice enrollments separately from all other graduate students in both the Fall

Enrollment and 12-month Enrollment components and would allow for reverting to the original calculation of first-professional FTE detailed in Table 1.

Further Expansion of this Approach: This approach could be taken further to distinguish among graduate levels, such as breaking out master's students, doctor's-professional practice students, and all other doctor's degree students for both the Fall Enrollment and 12-month Enrollment components. In addition to providing institutions with more detailed benchmarking data on graduate enrollments, this would allow for the possibility of introducing finer distinctions in the student FTE divisors by graduate level as used by some states and by many institutions.

2. 12-month Headcount Based FTE Measure

Instead of using instructional activity data to determine the FTE, the collection of unduplicated annual headcounts could be expanded to include an "enrollment intensity" dimension for this purpose. In addition to collecting headcounts by gender, race/ethnicity and student level (undergraduate/graduate), the dimension of full-time part-time or the more fine-tuned enrollment intensity categories suggested in the expansion of approach 0, could be added to the 12-month Enrollment component. This approach could also be supplemented by further disaggregating graduate students by master's, doctoral-professional, and doctoral-research/scholarship and other.

3. Course-Level Based Instructional Activity Data and FTE Measures

This approach can be taken as a variation to the first two approaches detailed above. Any credit/contact hour data would be reported according to course level rather than student level. Moving to a course-level based approach could also accommodate distinctions, such as master's and doctor's-level instructional activity discussed in several of the above approaches. Though not necessarily in the scope of this paper, it is worth mentioning that this approach to instructional activity data could also allow for distinctions at the undergraduate level, such as lower division and upper division undergraduate, as already done in several states.

Determining which approach, or combination of approaches, would be most suitable for improving the graduate and doctor's-professional practice student FTE measure within IPEDS must be guided by an assessment of level of institutional reporting burden that would be imposed balanced by the increase in precision gained through the proposed calculation method.

APPENDIX

The following individuals were interviewed for this paper:

Julie Carpenter-Hubin
Director of Institutional Research and Planning
The Ohio State University

Braden Hosch
Director of Policy, Finance and Academic Affairs
Connecticut Department of Higher Education

Joseph Marks
Director of Education Data Services
Southern Regional Education Board

Chris Meiers
Registrar
University of Kansas University Medical Center
Chair, Group on Student Affairs for the National Committee of Student Registrars
Association of American Medical Colleges

Kent Phillippe
Associate Vice President, Research and Student Success
American Association of Community Colleges